

e-marketplaces for all

Gregory MILOPOULOS¹, Nancy POULOU DI², George LYTRAS¹

¹Pouliadis Associates Corporation S.A. [3], 142, Sygrou Av. Athens 17671 Greece, Direct Line: (+3010 9283685), Direct Fax: (+3010 9241066), E-mail: g.milopoulos@pouliadis.gr

² ELTRUN – The eBusiness Center [7], Athens Univ. of Economics & Business, 47A Evelpidon Str, 113 62 Athens, Greece, Direct Line: (+3010 8203682), E-mail: pouloudi@aub.gr

¹Pouliadis Associates Corporation S.A. [3], 142, Sygrou Av. Athens 17671 Greece, Phone Line: (+3010 9215625), Direct Fax: (+3010 9241066), E-mail: g.lytras@pouliadis.gr

Abstract. Large scale and rapid take up of e-business by European SMEs is an essential prerequisite to European competitiveness and this is reflected in the European Commission's Global Information Society objectives and specifically in the e-Europe strategy. Large dynamic corporations have already adopted new e-Business models successfully. However, SMEs are struggling to survive in a highly competitive international market. SMEs face difficulties in terms of gaining access to electronic marketplaces. A major concern for SMEs is whether e-business actually entails benefits; they need to be persuaded that e-business is relevant and beneficial to their specific business environment. One of the critical difficulties that SMEs face is that the information provided on e-business tends to be too generic. Therefore they are uncertain about where specific information can be found and how they could proceed, in a cost-effective manner, to e-business

1. Introduction

The main objective of CEBOS (Cost Effective eBusiness Operating Services for SMEs) is the establishment and evaluation of e-business mediation sites (e-marketplaces) that will progressively minimize the gap between SMEs and the international on-line market. CEBOS will provide cost efficient e-business solutions customized according to regional and sectoral requirements of SMEs (initially those targeted in the proposed Best Practice Action but with a thorough plan for European wide expansion) and make available to SMEs the opportunity for going digital under a concentrated market perspective.

CEBOS's strategic business objectives are:

- o *Validating a high customisable e-Business model for concentrated e-marketplaces*, which will eventually contribute to sustainable regional and European SME growth. The CEBOS e-business platform will provide advanced business solutions via customisation of process models, work and information flows and user interfaces. Their validation will be achieved through CEBOS Best Practice pilots.
- o *Facilitating SMEs towards cost efficient participation in e-Business activities*. For the duration of the project, alternative annual costs for participating in CEBOS market places will be defined according to current and future market values. This cost is directly associated with the best practice that CEBOS is going to demonstrate, and will be compared with alternative modes of going digital in order to demonstrate its competitiveness.
- o *Improving the e-Business maturity in each regional environment of the project*. For the duration of CEBOS extended dissemination activities will facilitate project awareness along with the active participation of SMEs in its pilots and the establishment of e-Business reference nodes in each region. Parallel marketing activities directed to the end consumers will also support this objective.
- o *Provision of e-Business reference points in each region for SME training and consulting*. Each catalyst organization will establish a help desk providing assistance for the CEBOS pilots and e-Business adoption in general. We expect that through CEBOS dissemination and marketing activities, the number of served SMEs will be more than 100 per region until the end of the project.
- o *Deployment of electronic markets that will increase WEB content and provide high quality services for the end consumers*. It is expected that more than 100 SMEs per region will participate in the pilots, achieving an average of 5,000 products in each market place with comparative and group shopping services for increasing customer satisfaction and loyalty.

2. The CEBOS Business Model

The philosophy of CEBOS business and technology model lies upon the fact that each SME will be able to develop its on-line product catalogue and its internal process model through a light CEBOS tool (local node) that supports alternative business concepts and visualizes the internal operation of the SME digital business model (in this way the SME does not have to be continuously online and it can test the model internally before commercial operation). For example an SME will define what workflow mechanisms

requires internally among corporate users, what processes will work automatically, what services will be available and what products will be selling on line.

In simple terms, CEBOS will provide a self sustainable marketplace remotely administrated by its users. The light CEBOS tool will be broadly disseminated in the regional target markets in order to attract more users (it will be also downloadable from CEBOS site). The tool will be able to provide SMEs with a comprehensive view of their catalogue and process model and enhance internal e-Business maturity. The CEBOS site will also provide the necessary mechanisms for online training of corporate and individual users in order to position itself more efficiently. Special attention will be paid in the user interfaces that should support multiple European Languages for efficient introduction of services in European Dimension.

During CEBOS, the necessary IT infrastructure is established in multiple mediation sites (catalysts organizations or SME associations) that will facilitate SME e-Business training & consulting and broad e-Business diffusion in order to accomplish a sustainable operation. In addition to SME Associations that already participate in the project, a comprehensive SME user set will also be invited to join the project in order to provide detailed requirements and business cases for the evaluation of CEBOS model and complete the stakeholders group.

The CEBOS technology infrastructure is based on available e-Business software solutions, including L@andscape, a platform developed by Cyberce [14], and iBOS, a platform developed by INLECOM [9]. The selected technology infrastructures provide generic mechanisms for WEB catalogue development and hosting, transaction aggregation, market communication, business analysis and direct e-marketing. Further, they support a number of business processes such as Product Introduction, Product Promotion and Communication, Product Merchandising and Product Replenishment.

3. The CEBOS Vision

The vision of CEBOS is to provide Best Practices for SMEs to 'Go Digital' in a cost efficient way by establishing Electronic B2C-oriented Market Aggregators (marketplaces) in several regions of Europe (Greece, Spain, UK and Romania), as determined below:

"a collection of individual trade sites (e-Stores) under a common umbrella (market segmented), with a single entry point to individual sites and a rich set of value adding informational and transactional services".

These market aggregators can be easily extended to support more innovative models in the future.

4. CEBOS Services

The objective of CEBOS is to provide electronic services that can match the basic e-Business needs of the small & medium enterprise by supporting the information flow, among the Seller and Buyer business processes. This will be accomplished with three progressively culture building services:

- o *E-Brochure Services*: it is a generic Marketing Service and refers to the fast and cost efficient generation and publication of an electronic corporate site promoting the company's activities and profile. Usually simple WEB Sites development and hosting belong to this category of services. It should also be noticed that these services are provided to the Sellers as custom services according to the actual content they wish to publish on-line. This service can be performed either using the selected Technology Platforms or WEB Sites development tools.
- o *E-Catalogue Services*: It is an advanced Marketing Service and refers to the easy and cost efficient development and publication of information-rich catalogue for product promotion and customer support. The selected Technology Platforms must be able to apply catalogue and product management facilities based on an open architecture that will support from the one hand product code outlines and on the other hand variable product characteristics.
- o *Transactional Services*: It engages several Business activities of the enterprise as it provides the necessary mechanism for price catalogues, customer relationship management, order management and purchase term arrangement. It is an add-on to the e-Catalogue Service. The selected Technology Platforms must provide these built-in mechanisms to support on-line transactions.

5. Planned activities

The overall service bouquet of CEBOS must be extended in order to support the overall business model and ensure that all business actors are engaged. To this end we distinguish the complementary services into

two categories:

- o Other Electronic Services:
 - o Electronic Payment (Credit Card Clearance / Electronic Funds Transfer), provided by affiliated Financial Institutions.
 - o Certification Services, provided by regional Certification Authorities. Dedicated software may also be utilized for this purpose.
- o Physical Services:
 - o Subscription services, provided by CEBOS and regional partners. This service may also be offered on-line.
 - o Training & Consulting, provided by Regional partners and CEBOS Market Aggregator
 - o Logistics & delivery services, provided by affiliated transport vendors.

6. Conclusions

The adoption of electronic commerce provides SMEs with significant advantages in terms of global presence, minimization of costs and improved customer service. However, the literature also reports several barriers in the adoption of electronic commerce by these companies. The most commonly cited barriers include lack of awareness, lack of specialized human resources and high set up costs, not only because SMEs have limited resources but also because, as a rule, they do not often invest in long-term strategies.

An interesting aspect of the CEBOS project is that it considers the deployment of e-commerce technology platforms in areas located in four European countries with substantially different profiles in terms of e-commerce maturity. Indeed it has been reported that the UK, Spain, Greece and Romania each belong to a different cluster of countries in terms of 'e-readiness': leaders, contenders, followers and laggards respectively [15]. In order to consider the implications of this statement for the CEBOS project we have undertaken a statistical analysis, capturing the current status of ICT use in the four countries. These confirm the different level of electronic commerce use while at the same time they show that SMEs dominate the business environment in all four countries.

Clearly, the e-readiness of a country influences e-commerce adoption by SMEs. However, CEBOS focused on understanding the *local* environment in order to identify factors influencing CEBOS acceptance. The investigation of the local context has helped CEBOS identify relevant services for each target market and note differences across countries and sectors. Thus, a first general conclusion that follows from this project work is that **while the general business environment influences the predisposition of SMEs to engage in e-business, it is more useful, in terms of effectiveness for e-business solutions addressed to SMEs, to study carefully their local context.** For example, the findings of CEBOS illustrate that although the e-readiness of the four *countries* is at different levels, when taking a closer look at SMEs within specific *regions or sectors* in these countries, in some cases the status of development is similar and rather under-developed. Indeed, the great majority of the SMEs do not have the ability, the resources or the know-how that is required so they would "build" an e-shop by themselves and host it in their premises. This conclusion is mostly evident in the SMEs from Greece, Romania and Spain that participated in the CEBOS research and arises from the reported poor IT infrastructure and the misunderstanding of issues that are strongly related with e-commerce policies.

It is therefore clear that SMEs will need a lot of support, particularly during the first stages of their engagement in e-commerce activities. This support in some cases (Greece, Spain, Romania) has to involve introductory training in the notion, opportunities and risks that e-commerce brings to SMEs. Already, in the case of Romania, IPA has started providing relevant material to SMEs interested in CEBOS via distance learning. The reason for this approach is (a) the geographical spread of Romanian SMEs and (b) the reluctance of many SME members to spend part of their working day on what they currently perceive to be outside of their core business activity. This latter issue, first recorded in Romania, has been recognized by other User Associations in the consortium as an important factor that needs to influence the project's approach to training.

A unique contribution of the CEBOS business model becomes evident through the active participation of User Associations. These **Regional Facilitators provide a trusted community for SMEs in each region, offering them better services and support.** These services would be far more difficult to offer to individual companies in today's competitive market. Within CEBOS, the services of User Associations and Catalysts combined can offer business development and technology consulting respectively, so that the SMEs needs are fulfilled. **On the one hand there is someone that understands and represents SME needs and is also accessible (the User Association) and on the other hand someone that offers and maintains the**

technology platform that will support their e-business (the Catalyst). This is a third conclusion from the work in CEBOS that can benefit other efforts for SMEs to 'go digital'.

A key point raised by the User Associations participating in CEBOS is that the SMEs they represent have shown an interest in the project because it provides a protective, low cost environment during the pilot phases, but also because it promises to provide *an aggregated store front that will improve their visibility*. **The issue of visibility is very important for all SMEs, and they recognize that as single entities they do not have the necessary resources for promoting their electronic store-front effectively.** This accentuates further the effectiveness of the CEBOS solution, whereby the user associations are better placed, as key local nodes, to promote the activities of their members.

Acknowledgment

The research described in this paper has been funded by the European Commission under the Information Society (IST) Programme. The research is a joint effort among: Pouliadis Associates Corporation [3], Cyberce Integrated E-Commerce Solutions [14], Incubator of New Enterprises at Chania [4], Trader Association of Thessaloniki [5], Archimedia S.A. [6], Research Centre of Athens University Of Economics and Business/ ELTRUN [7], IPA S.A [8], INLECOM Ltd [9], Liverpool Chambers of Commerce and Industry [10], Fundació Catalana per a la Recerca [11], Fedequim [12], IACSI [13].

References

- [1] <http://www.archimedia.gr/cebos/index.htm>
 - [2] "2000 Work Programme: Information Society Technologies. A programme of Research, Technology Development & Demonstration under the 5th Framework of European Research", Brussels, 23/3/2000
 - [3] <http://www.pouliadis.gr/>, Pouliadis Associates Corporation, Greece
 - [4] <http://www.incubator-chania.gr>, Incubator of new Enterprises at Chania, Greece
 - [5] <http://traders-the.gr/contact-en.html>, Trader Association of Thessaloniki, Greece
 - [6] <http://www.y-net.gr>, Archimedia SA, Greece
 - [7] <http://www.eltrun.aueb.gr>, ELTRUN, the eBusiness Centre, Research Centre of the Athens University of Economics and Business, Greece
 - [8] <http://www.ipa.ro>, IPA SA, Romania
 - [9] <http://www.inlecomsystems.com>, INLECOM LTD, United Kingdom
 - [10] <http://www.liverpoolchamber.org.uk>, Liverpool Chambers of Commerce and Industry, United Kingdom
 - [11] <http://www.fcr.es>, Fundació Catalana per a la Recerca, Spain
 - [12] <http://www.fedequim.es>, Federación Empresarial Catalana del Sector Químico, Spain
 - [13] IACSI –Sant Isidre Agricultural Institute, Barcelona, Spain
 - [14] <http://www.cyberce.gr>, CYBERCE Integrated Electronic Commerce Solutions Ltd
 - [15] <http://www.ebusinessforum.com>
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